

EGIGATEK eGM-A25 Brief

(Nordic nRF51822 BT4.0 Low Energy Single Mode Module)

1. Description

eGM-A25 is product from Nordic's single mode BLE solution, is the next generation bluetooth solution for smartphone connectivity and cable replacement applications with low energy consumption. eGM-A25 is a small size Bluetooth 4.0 single mode module (17x10x2.6mm) and range in line of sight is about 50m.

eGM-A25 supports the Terminal I/O profile. Terminal I/O works similar to SPP and offers a simple, point-to-point solution for use cases that require low data rate and transparent data exchange. It is controlled by a simple AT command interface. The module comes with a generic GATT interface. This interface allows the use of any Bluetooth Low Energy profile.

2. Features

- Bluetooth Low Energy available with Nordic nRF51822
- Bluetooth specification V4.0 compliant
- Supports Bluetooth low energy
- Fully qualified Bluetooth V4.0 Single Mode LE
- Fast Connection Setup
- RF output power -30 up to +3dBm
- RSSI
- High sensitivity design
- Internal crystal oscillator (16 MHz)
- Stamp Surface Mount type. eGM-A25: 17 x 10 x 2.6 mm
- Flexible Power Management
- 128-bit AES encryption
- High-speed UART interface
- I2C Master
- SPI Master/Slave interface
- Low power comparator
- Real Time Counter
- Up to 15 digital IO's for individual usage by embedded software
- Up to 6 analog inputs for individual usage by embedded software
- 8/9/10bit ADC

- Arm® Cortex™-M0 core for embedded profiles or application software
- Operating temperature: -25 ~ +75°C
- Manufactured in conformance with RoHS

3. Applications

The eGM-A25 is designed to be used in low power applications, like sensor devices.

Supported profiles are:

1. Terminal I/O
2. GATT based LE-profiles

3.1 General Cable Replacement

In case there is no standardized application specific profile available the eGM-A25 offers Terminal I/O profile, which allows transparent data transfer over UART and supports Secure Simple Pairing, making the pairing process easy and the connection secure. Terminal I/O is available for iOS and Android.

3.2 Industry

eGM-A25 can be used to monitor and control motors, actuators, valves and entire processes.

3.3 POS/Advertising

eGM-A25 supports iBeacon or similar applications.

3.4 Healthcare and Medical

Usage of Bluetooth is aimed mainly at devices that are used for monitoring vital data. Typical devices are blood glucose meter, blood pressure cuffs and pulse ox meters. Bluetooth BR/EDR and low energy were chosen by the Continua Health Alliance as transports for interoperable end to end communication.

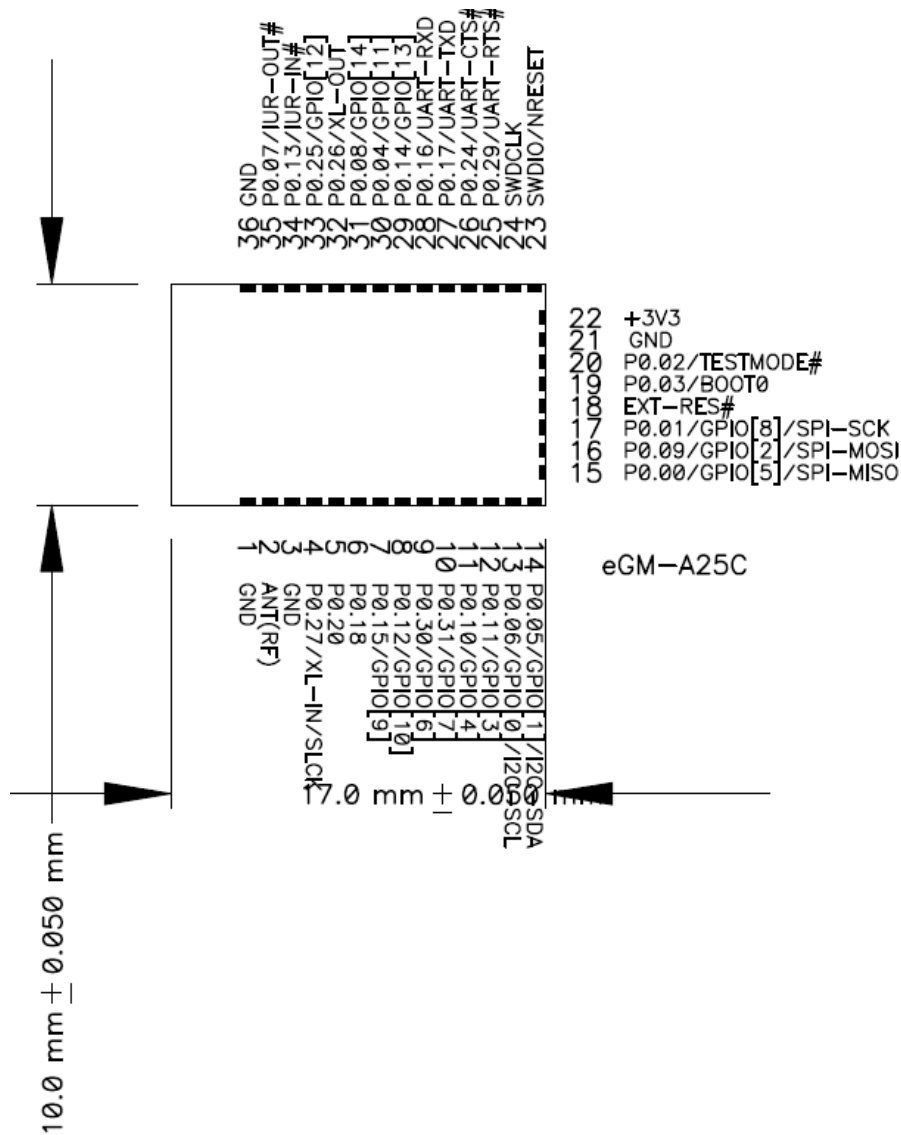
3.5 Sports and Fitness

In the sports and fitness segment the eGM-A25 is used in devices for positioning as well as monitoring vital data. Typical devices in this market are heart rate monitors, body temperature thermometers, pedometers, cadence meters, altimeter, positioning / GPS tracking and watches displaying information from sensors.

3.6 Entertainment

Bluetooth technology is already used in a wide variety of devices in the entertainment sector, namely set-top boxes / gaming consoles. eGM-A25 is especially suited for use in remote controls, gaming controller and wireless mouse/keyboard applications.

4. Dimensions (in mm)



5. Land Pattern

